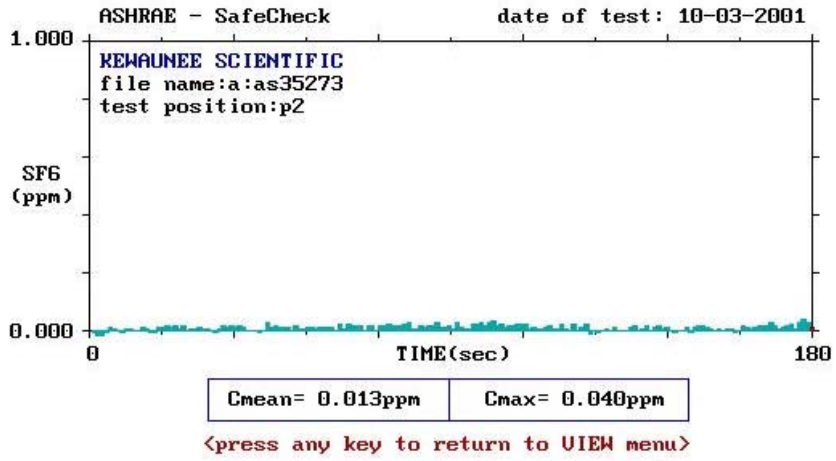
Presentation Outline:

"AN ANALYSIS OF LOW CONSTANT FUME HOODS: EFFECTIVENESS AND ACCEPTANCE"

I. Most laboratory casework manufacturers are now developing and marketing new fume hoods with several objectives:
   A. Reduce exhaust flow
      Example: ***dynamic barrier fume hood***

Nominal Width	**Bypass Exhaust (CFM)**	**Bypass Annual Energy Cost**	***dynamic barrier* Exhaust (CFM)**	***dynamic barrier* Annual Energy Cost**
4' Bench	810	$ 2430	225	$ 675
5' Bench	1050	$ 3150	280	$ 840
6' Bench	1290	$ 3870	350	$ 1050
8' Bench	1770	$ 5310	485	$ 1455

B. Exhibit good ANSI/ASHRAE 110-1995 containment characteristics, both as manufactured and as installed.



C. Simplify design to minimize maintenance and repair

II. The researcher investigated the above design objectives using both in-house and field testing.

A. Based on specific design parameters, exhaust was reduced by 40%-70%

B. Containment characteristics are good for low constant volume hoods manufactured by Kewaunee, but need to be taken with a grain of salt. (Face velocity vs. sash opening)

C. Maintenance and repair needs to be combined with fume hood training issues.